**Labile carbon and carbon management index in peat planted with various crops.**


ABSTRACT

Changes in soil carbon (C) from forest to agriculture land in Mukah, Sarawak, and Simpang Renggam (SR) Johor were studied. The changes in labile C (CL) (Mukah, 0.7–43%; SR, 0.2–20%) were greater than changes in the total C (CT) (Mukah, 0.5–9%; SR, 0.3–7%) as compared to the forest. In Mukah, oil palm and pineapple ecosystems showed approximately 18% and 6% increases in CL at a soil depth of 0–15 cm, respectively, as compared to the forest, and thus had greater C management index (CMI) values. In the sago ecosystem, the decline in CL was approximately 26% at the soil depth of 0–15 cm as compared to the forest. In SR, oil palm and pineapple ecosystems showed approximately 0.2% and 19% decreases in CL, respectively, at soil depths of 0–15 cm, resulting in low CMI value. The CL and the CMI can be used to monitor the rate of changes in soil C for different land uses on peat.



**Keyword:** Labile carbon; Oil palm; Tropical peat.